Preventing Peanut Allergies

Application and Implications for the NIAID Guidelines

Disclosure

• Consultant to National Peanut Board



Learning Objectives

After the session, the attendee will:

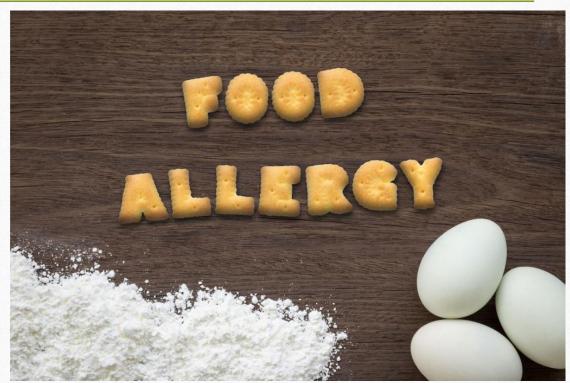
- Understand the basics about food allergies.
- Be able to share with clients the latest recommendations for when to introduce potentially allergenic foods to infants.
- Utilize evidence-based resources to learn and teach about food allergies and overcome barriers to early introduction.

Food Allergy Overview

The Basics

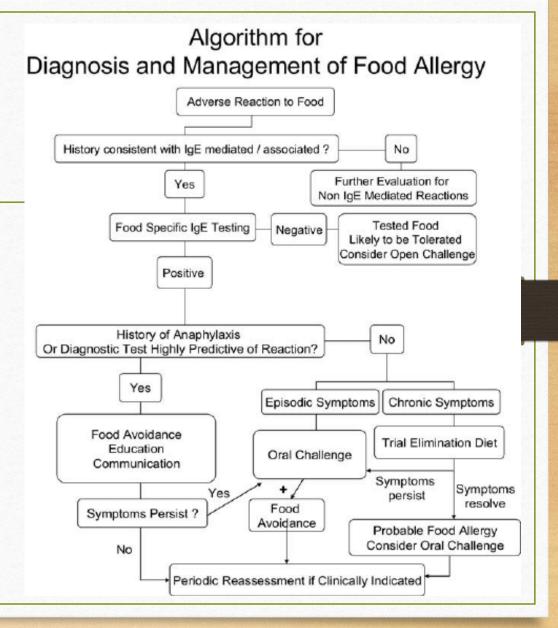
What is a food allergy?

- IgE mediated reaction
- Reaction occurs within minutes or (less commonly) in up to 2 hours
- Reproducible every time the food is eaten
- Sensitization does not always equate to true allergy



Diagnosis

- Detailed Diet and Health History
- Skin prick test
- Serum IgE test
- Oral Food Challenge



Signs and Symptoms



www.foodallergy.org

For a suspected or active food allergy reaction:

THE FOLLOWING SEVERE SYMPTOMS

- LUNG: Short of breath, wheezing, repetitive cough
- HEART: Pale, blue, faint, weak pulse, dizzy
 - THROAT: Tight, hoarse, trouble breathing/swallowing
- MOUTH: Significant swelling of the tongue and/or lips
- SKIN: Many hives over body, widespread redness
- GUT: Repetitive vomiting or severe diarrhea
- OTHER: Feeling something bad is about to happen, anxiety, confusion

OR MORE MILD SYMPTOM

- NOSE: Itchy/runny nose, sneezing
- MOUTH: Itchy mouth
- SKIN: A few hives, mild itch
- GUT: Mild nausea/discomfort







- INJECT EPINEPHRINE IMMEDIATELY.
- Call 911. Request ambulance with epinephrine.

Do not depend on antihistamines. When in doubt, give epinephrine and call 911.

The Big 8

The Big-8



Prevalence

- Difficult to estimate; likely over-stated due to selection bias, over-diagnosis using SPT/sIgE
- Estimates range from 4-5% of adults to 6-8% of children.
- Recent study showed 4% of adults; seafood was most common.
- Milk and eggs are most common, but also most often outgrown. Peanut affects 1% to 2% of children.

"THERE IS NO ESTIMATE OF TRUE PREVALENCE OF FOOD ALLERGY IN THE U.S." NAS, NIH Expert Consensus

Food Allergy Research Update

Science-based Shifts

An Interesting Difference

- UK infants were 10x as likely to have peanut allergy as Israeli infants
- What's the difference?
- Israeli infants weaning food
- BAMBA!



Learning Early About Peanut allergy (LEAP)

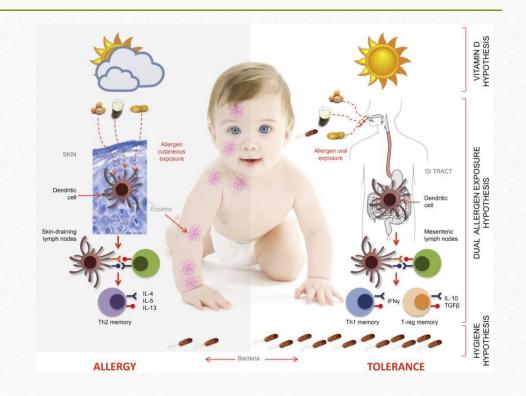
- 530 infants at high-risk for peanut allergy d/t egg allergy or mod/severe eczema
- Half ate peanut foods at 4-11 months
- Half avoided
- Up to 86% reduction in peanut allergy at the end of 5 years
- Early introduction is safe and effective

http://www.nejm.org/doi/full/10.1056/NEJMoa1414850#t=article



Dual Exposure Hypothesis

- Sensitization may occur before oral introduction
- Eczema 25% will develop allergy
- Simultaneous Oral Introduction induced tolerance
- There are probably other contributors



LEAP-On

- Followed same kids from LEAP for 12 more months
- Everyone avoided peanut foods
- Tolerance and protection from early introduction was retained

http://www.nejm.org/doi/full/10.1056/NEJMoa1514209#t=article



Enquiring About Tolerance (EAT)

- Recruited breastfed infants for early intro of 6 foods
 - Milk
 - Egg
 - Peanut
 - Wheat
 - Sesame
 - Fish
- Safe, no negative impact on BF, however mixed impact on risk, poor compliance

http://www.jacionline.org/article/S0091-6749(16)00135-4/abstract







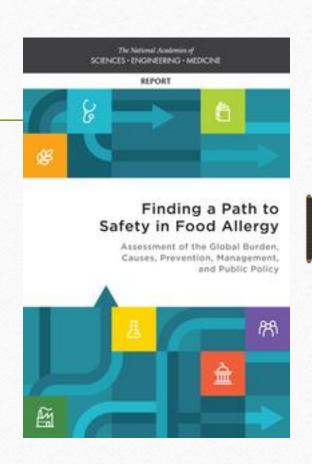


Changing Guidelines

From Research to Consensus to Guidelines

History

- 2000 AAP recommended avoiding the top allergens for 1, 2 or 3 years
- 2008 Rescinded guidance on avoidance, stating that the research doesn't support avoidance as a way to prevent allergies, "more research is needed"
- 2010 NIAID Guidelines for the Diagnosis and Management of Food Allergies
- 2015 Consensus Report
- 2017 NIAID Addendum to the Guidelines
- 2017 NASEM Report on Global Burden of Food Allergies



NIAID Addendum Guidelines

- Group 1 (High-risk): infants with egg allergy or severe to moderate eczema or both
 - Discuss with pediatrician or allergist before introducing peanut foods
 - Skin prick testing may be recommended
 - Depending on SPT results, first oral intro may happen at doc's office
 - Intro recommended at 4-6 months
 - Children should eat 2g peanut protein three times per week thereafter

NIAID Addendum Guidelines (cont)

- Group 2 (Moderate-risk) mild eczema
 - Not necessary to discuss with pediatrician first, but may
 - Should introduce at home
 - At or after 6 months
- Group 3 (Low-risk)
 - Introduce at home at or after 6 months
 - Age-appropriate and in accordance with family preferences and cultural practices

https://www.niaid.nih.gov/diseases-conditions/guidelines-clinicians-and-patients-food-allergy

Possible Unintended Consequences

- Significant increase in the number of infants unnecessarily screened for peanut allergy
- Potential for over-diagnosis due to poor positive predictive value of current screening tools
- Extra burden on pediatricians, which they may not be able to reasonably accommodate
- Potential for parents to not introduce peanuts because they fear the "missed the window"
- Increasing clinicalization of normal child feeding activities

http://jamanetwork.com/journals/jama/fullarticle/2603418

Consumer & Professional Surveys

- 40% of millennial parents are not aware of the NIAID Guidelines for early introduction of peanut foods.
- Many parents are afraid to introduce peanuts and other allergens, often even without known risk factors.
- Parents want additional information on why the guidelines changed, how to introduce allergens, and what to expect.
- A significant percentage (perhaps more than 80%) of physicians may still not be following the NIAID Guidelines in full.

What Are the Current Guidelines?

- Evidence does not support dietary manipulation or avoidance to prevent the development of food allergies during pregnancy OR breastfeeding.
 - 2013 study showed a decrease in peanut allergies among mothers who ate peanuts during pregnancy and breastfeeding
- Infants should begin complementary feeding by 6 months, including potentially allergenic foods.
 - Follow NIAID guidelines for peanut foods.

Potential Barriers & Concerns

• Peanuts are a choking hazard for infants!

• Yes, they are. Infants should be introduced to peanut foods (and all foods) in safe forms, such as peanut butter thinned with warm water, peanut butter powder mixed into cereal, or infant-friendly purees.

Potential Barriers & Concerns Continued

• I'm afraid of a reaction! Parents and others fear life-threatening reactions in infants.

We don't want baby to stop breastfeeding.

- A 2018 study showed that infants are less likely to suffer severe reactions than older children.
- While anaphylaxis is rare, there is now an infant approved epinephrine autoinjector if needed.
- Studies show breastfeeding rates are not significantly different when early introduction is employed.
- Early introduction is part of normal complementary feeding and should not replace breastfeeding or formula completely.

Potential Barriers & Concerns Continued

• My child doesn't have eczema or allergies, so we'd prefer to wait.

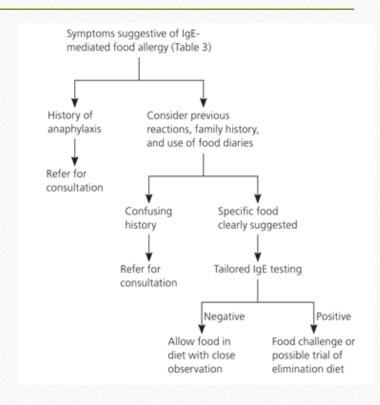
- The majority of food allergic children had no known risk factors. Early introduction may protect all children from developing food allergies and there is no research to support waiting.
- However, the older a child gets before a first introduction, the more likely they are to develop a true food allergy.

Application for Practice

What We Can Do

The Role of the RDN & Nutrition Educator

- Help parents understand the research
- Guide introduction according to their risk
- Encourage confident feeding behavior
- Respond to potential allergies with evidence-based advice
 - Refer to board-certified allergist for accurate diagnosis
 - Food allergy-focused education
 - Liberalized diet to prevent deficiency
 - Promote self-efficacy and quality of life



Bottom Line?

- Empower parents to feed babies confidently.
- Educate them about what to expect.
- Answer their questions clearly and with science-based information.
- Provide simple, concise resources.



How to Introduce Peanut Foods

General Instructions

- Feed your infant only when he or she is healthy; do not do the feeding if he or she has a cold, vomiting, diarrhea, or other illness.
- Give the first peanut feeding at home and not at a day care facility or restaurant.
- Make sure at least 1 adult will be able to focus all of his or her attention on the infant, without distractions from other children or household activities.
- Make sure that you will be able to spend at least 2 hours with your infant after the feeding to watch for any signs of an allergic reaction.

https://www.niaid.nih.gov/sites/default/files/addendum guidelines peanut appx d.pdf

How to (continued)

Feeding Your Infant

- Prepare a full portion of one of the peanut-containing foods from the recipe options.
- Offer your infant a small part of the peanut serving on the tip of a spoon.
- Wait 10 minutes.
- If there is no allergic reaction after this small taste, then slowly give the remainder of the peanut-containing food at the infant's usual eating speed.

www.PreventPeanutAllergies.org

Prevent Peanut Allergies

Know Your Child's Risk How to Introduce Real Parents, Real Stories Frequently Asked Questions

INTRODUCING PEANUTS TO YOUR INFANT EARLY CAN HELP PREVENT A PEANUT ALLERGY

WE ARE HERE TO HELP YOU TAKE THE FIRST STEP





www.PeanutAllergyFacts.org

INTRODUCING PEANUT PRODUCTS TO YOUR BABY EARLY





Preventing a Potential Peanut Allergy

https://youtu.be/4zSukGaRnP8

Easy Infant and Toddler Recipes



Easy Products for Peanut Introduction

- Peanut-Corn Snack Puffs
- Thinned Peanut Butter
- Powdered Peanut Butter
- First Nuts (applesauce base)





Academy of Nutrition and Dietetics' Practice Paper: The Role of the RDN in the Diagnosis and Management of Food Allergies

- Assist in ensuring Accurate Diagnosis
- Use the Nutrition Care Process
- Provide Nutrition Education to Prevent Accidental Ingestion
- Train to Respond to Reactions

- Prevent Nutritional Deficiencies
- Empower to Improve Quality of Life
- Clinician Counselor Advocate

http://www.eatrightpro.org/resource/practice/position-and-practice-papers/practice-papers/practice-paper-role-of-the-rdn-in-the-diagnosis-and-management-of-food-allergies

What's Next?

Future Research and Directions

Peanut Allergy Research Underway

- What about early introduction and other allergens?
- Other Contributors to allergy development?
 - Microbiome/Gut Microbiota
 - Vitamin D
 - Omega-3 Fatty Acids
 - Diet diversity
- Better diagnostic measures
- Allergen Thresholds
- Treatment and Immunotherapy



NAS Report:

Finding a Path to Safety in Food Allergy

These 6 actions, performed by a diverse group of stakeholders in a variety of settings, can contribute to greater awareness and public safety regarding food allergy:

- 1. Obtain accurate prevalence estimates
- 2. Use proper diagnostic methods and provide evidence- based health care
- 3. Identify evidence-based prevention approaches

- 4. Improve education and training
- 5. Implement improved policies and practices to prevent the occurrence of severe reactions
- 6. Expand research programs

http://www.nationalacademies.org/hmd/Activities/Nutrition/FoodAllergies.aspx

More Questions

- What about other allergens? Milk, eggs, tree nuts, soy, wheat, etc.?
- What are the risk factors for developing peanut and other food allergies?
- Can we prevent other atopic diseases, such as environmental allergies and asthma?



Resources for You

National Peanut Board Sponsored and Independent Resources

Additional Resources

- NIAID Guidelines
 - 2010 Guidelines for the Diagnosis and Management of Food Allergy in the United States
 - 2017 Addendum Guidelines for the Prevention of Peanut Allergy in the United States
- CDC Voluntary Guidelines for Managing Food Allergies in Schools & Early Care and Education Programs

- Practice Paper: <u>The Role of the RDN in</u> <u>Food Allergy Diagnosis and Management</u>
- National Academies of Science, Engineering and Medicine Report: <u>Finding</u> <u>a Path to Safety in Food Allergy: Assessment of</u> <u>the Global Burden, Causes, Prevention,</u> <u>Management, and Public Policy</u>
- Food Allergy & Anaphylaxis Connection <u>Team</u>
- American College of Allergy, Asthma and Immunology

National Peanut Board

- PeanutAllergyFacts.org provides information for:
 - Consumers, Parents, Concerned Citizens
 - Healthcare Professionals
 - School Nutrition Professionals
 - And links to:
 - CDC Guidelines
 - School Nutrition Association's Food Allergy Resource Center

- PreventPeanutAllergies.org
 - Partnership with ACAAI and FAACT
 - Consumer focused campaign to educate parents about the benefits of early introduction of peanut foods to prevent peanut allergies
 - Justin Baldoni & Other Health Influencers share their stories about early introduction

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